

FR-4 Multilayer Low Tg PCB Material

Recommended Drill Series: 100, 150, 430, 460, 480, 560, 580

| Drill Size | Diameter (inch) | Feed (inch/min) | Speed (k-rpm) | Retract (inch/min) | Z-Axis Offset (inches) | Max Hits | Chipload (mm/rev) | SFM |
|------------|--------------------|--------------------|------------------|-----------------------|---------------------------|----------|----------------------|-----|
| 0.10mm | 0.0040 | 36 | 120 | 200 | -0.011 | 500 | 0.30 | 126 |
| 0.13mm | 0.0050 | 42 | 120 | 300 | -0.011 | 600 | 0.35 | 157 |
| 0.15mm | 0.0059 | 46 | 120 | 300 | -0.011 | 600 | 0.38 | 185 |
| #96 | 0.0063 | 50 | 120 | 400 | -0.011 | 600 | 0.42 | 198 |
| #95 | 0.0067 | 52 | 120 | 400 | -0.012 | 600 | 0.43 | 210 |
| #94 | 0.0071 | 56 | 120 | 500 | -0.012 | 600 | 0.47 | 223 |
| #93 | 0.0075 | 60 | 120 | 500 | -0.012 | 600 | 0.50 | 236 |
| #92 | 0.0079 | 64 | 120 | 500 | -0.012 | 800 | 0.53 | 248 |
| #91 | 0.0083 | 68 | 120 | 600 | -0.012 | 800 | 0.57 | 261 |
| #90 | 0.0087 | 72 | 120 | 600 | -0.012 | 800 | 0.60 | 273 |
| #89 | 0.0091 | 76 | 120 | 700 | -0.012 | 800 | 0.63 | 286 |
| #88 | 0.0095 | 80 | 120 | 700 | -0.012 | 800 | 0.67 | 298 |
| 0.25mm | 0.0098 | 84 | 120 | 800 | -0.012 | 1000 | 0.70 | 308 |
| #87 | 0.0100 | 86 | 120 | 800 | -0.012 | 1000 | 0.72 | 314 |
| #86 | 0.0105 | 90 | 120 | 800 | -0.012 | 1000 | 0.75 | 330 |
| #85 | 0.0110 | 95 | 120 | 900 | -0.013 | 1000 | 0.79 | 345 |
| #84 | 0.0115 | 100 | 120 | 900 | -0.013 | 1000 | 0.83 | 361 |
| 0.30mm | 0.0118 | 105 | 120 | 1000 | -0.013 | 1200 | 0.88 | 371 |
| #83 | 0.0120 | 110 | 120 | 1000 | -0.013 | 1200 | 0.92 | 377 |
| #82 | 0.0125 | 115 | 120 | 1000 | -0.013 | 1200 | 0.96 | 393 |
| #81 | 0.0130 | 120 | 120 | 1000 | -0.013 | 1200 | 1.00 | 408 |
| #80 | 0.0135 | 125 | 120 | 1000 | -0.013 | 1500 | 1.04 | 424 |
| 0.35mm | 0.0138 | 128 | 120 | 1000 | -0.013 | 1500 | 1.07 | 433 |
| #79 | 0.0145 | 132 | 120 | 1000 | -0.013 | 1500 | 1.10 | 455 |
| 1/64 | 0.0156 | 138 | 120 | 1000 | -0.014 | 1500 | 1.15 | 490 |
| 0.40mm | 0.0158 | 140 | 120 | 1000 | -0.014 | 1500 | 1.17 | 496 |
| #78 | 0.0160 | 142 | 120 | 1000 | -0.014 | 1500 | 1.18 | 502 |
| 0.45mm | 0.0177 | 150 | 120 | 1000 | -0.014 | 1500 | 1.25 | 550 |
| #77 | 0.0180 | 152 | 117 | 1000 | -0.014 | 1500 | 1.30 | 550 |
| 0.50mm | 0.0197 | 154 | 107 | 1000 | -0.015 | 1500 | 1.44 | 550 |
| #76 | 0.0200 | 155 | 105 | 1000 | -0.015 | 1500 | 1.48 | 550 |
| #75 | 0.0210 | 156 | 100 | 1000 | -0.015 | 1500 | 1.56 | 550 |
| 0.55mm | 0.0217 | 158 | 97 | 1000 | -0.015 | 1500 | 1.63 | 550 |
| #74 | 0.0225 | 160 | 93 | 1000 | -0.015 | 1500 | 1.72 | 550 |
| 0.60mm | 0.0236 | 162 | 89 | 1000 | -0.016 | 1500 | 1.82 | 550 |
| #73 | 0.0240 | 162 | 88 | 1000 | -0.016 | 1500 | 1.84 | 550 |
| #72 | 0.0250 | 163 | 84 | 1000 | -0.016 | 1500 | 1.94 | 550 |
| 0.65mm | 0.0256 | 164 | 82 | 1000 | -0.016 | 1500 | 2.00 | 550 |
| #71 | 0.0260 | 165 | 81 | 1000 | -0.016 | 1500 | 2.04 | 550 |
| 0.70mm | 0.0276 | 166 | 76 | 1000 | -0.016 | 1500 | 2.18 | 550 |
| #70 | 0.0280 | 166 | 75 | 1000 | -0.017 | 1500 | 2.21 | 550 |
| #69 | 0.0292 | 166 | 72 | 1000 | -0.017 | 1500 | 2.31 | 550 |
| 0.75mm | 0.0295 | 166 | 71 | 1000 | -0.017 | 1500 | 2.34 | 550 |
| #68 | 0.0310 | 166 | 68 | 1000 | -0.017 | 1500 | 2.44 | 550 |
| 1/32 | 0.0312 | 166 | 67 | 1000 | -0.017 | 1500 | 2.48 | 550 |
| 0.80mm | 0.0315 | 166 | 67 | 1000 | -0.017 | 1500 | 2.48 | 550 |
| #67 | 0.0320 | 166 | 66 | 1000 | -0.017 | 1500 | 2.52 | 550 |
| #66 | 0.0330 | 164 | 64 | 1000 | -0.018 | 1500 | 2.56 | 550 |
| 0.85mm | 0.0335 | 163 | 63 | 1000 | -0.018 | 1500 | 2.59 | 550 |
| #65 | 0.0350 | 160 | 60 | 1000 | -0.018 | 1500 | 2.67 | 550 |
| 0.90mm | 0.0354 | 160 | 59 | 1000 | -0.018 | 1500 | 2.71 | 550 |
| #64 | 0.0360 | 159 | 58 | 1000 | -0.018 | 1500 | 2.74 | 550 |
| #63 | 0.0370 | 158 | 57 | 1000 | -0.019 | 1500 | 2.77 | 550 |
| 0.95mm | 0.0374 | 158 | 56 | 1000 | -0.019 | 1500 | 2.82 | 550 |
| #62 | 0.0380 | 156 | 55 | 1000 | -0.019 | 1500 | 2.84 | 550 |
| #61 | 0.0390 | 155 | 54 | 1000 | -0.019 | 1500 | 2.87 | 550 |
| 1.00mm | 0.0394 | 155 | 53 | 1000 | -0.019 | 1500 | 2.92 | 550 |
| #60 | 0.0400 | 154 | 53 | 1000 | -0.019 | 1500 | 2.91 | 550 |
| #59 | 0.0410 | 153 | 51 | 1000 | -0.020 | 1500 | 3.00 | 550 |
| 1.05mm | 0.0413 | 153 | 51 | 1000 | -0.020 | 1500 | 3.00 | 550 |
| #58 | 0.0420 | 150 | 50 | 1000 | -0.020 | 1500 | 3.00 | 550 |
| #57 | 0.0430 | 147 | 49 | 1000 | -0.020 | 1500 | 3.00 | 550 |
| 1.10mm | 0.0433 | 147 | 49 | 1000 | -0.020 | 1500 | 3.00 | 550 |
| 1.15mm | 0.0453 | 138 | 46 | 1000 | -0.021 | 1500 | 3.00 | 550 |

Note: This information is based on 120K RPM Spindle Capability. Please use maximum spindle speed if listed RPM is unattainable

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| Drill Size | Diameter (inch) | Feed (inch/min) | Speed (k-rpm) | Retract (inch/min) | Z-Axis Offset (inches) | Max Hits | Chipload (mm/rev) | SFM |
|------------|--------------------|--------------------|------------------|-----------------------|---------------------------|----------|----------------------|-----|
| #56 | 0.0465 | 135 | 45 | 1000 | -0.021 | 1500 | 3.00 | 550 |
| 3/64 | 0.0469 | 135 | 45 | 1000 | -0.021 | 1500 | 3.00 | 550 |
| 1.20mm | 0.0472 | 135 | 45 | 1000 | -0.021 | 1500 | 3.00 | 550 |
| 1.25mm | 0.0492 | 129 | 43 | 1000 | -0.021 | 1500 | 3.00 | 550 |
| 1.30mm | 0.0512 | 123 | 41 | 1000 | -0.022 | 1500 | 3.00 | 550 |
| #55 | 0.0520 | 120 | 40 | 1000 | -0.022 | 1500 | 3.00 | 550 |
| 1.35mm | 0.0531 | 120 | 40 | 1000 | -0.022 | 1500 | 3.00 | 550 |
| #54 | 0.0550 | 114 | 38 | 1000 | -0.023 | 1500 | 3.00 | 550 |
| 1.40mm | 0.0551 | 114 | 38 | 1000 | -0.023 | 1500 | 3.00 | 550 |
| 1.45mm | 0.0571 | 111 | 37 | 1000 | -0.023 | 1500 | 3.00 | 550 |
| 1.50mm | 0.0591 | 108 | 36 | 1000 | -0.024 | 1500 | 3.00 | 550 |
| #53 | 0.0595 | 105 | 35 | 1000 | -0.024 | 1500 | 3.00 | 550 |
| 1.55mm | 0.0610 | 102 | 34 | 1000 | -0.024 | 1500 | 3.00 | 550 |
| 1/16 | 0.0625 | 102 | 34 | 1000 | -0.025 | 1500 | 3.00 | 550 |
| 1.60mm | 0.0630 | 99 | 33 | 1000 | -0.025 | 1500 | 3.00 | 550 |
| #52 | 0.0635 | 99 | 33 | 1000 | -0.025 | 1500 | 3.00 | 550 |
| 1.65mm | 0.0650 | 96 | 32 | 1000 | -0.025 | 1500 | 3.00 | 550 |
| 1.70mm | 0.0669 | 93 | 31 | 1000 | -0.026 | 1500 | 3.00 | 550 |
| #51 | 0.0670 | 93 | 31 | 1000 | -0.026 | 1500 | 3.00 | 550 |
| 1.75mm | 0.0689 | 93 | 31 | 1000 | -0.026 | 1500 | 3.00 | 550 |
| #50 | 0.0700 | 90 | 30 | 1000 | -0.026 | 1500 | 3.00 | 550 |
| 1.80mm | 0.0709 | 90 | 30 | 1000 | -0.027 | 1500 | 3.00 | 550 |
| 1.85mm | 0.0728 | 87 | 29 | 1000 | -0.027 | 1500 | 3.00 | 550 |
| #49 | 0.0730 | 87 | 29 | 1000 | -0.027 | 1500 | 3.00 | 550 |
| 1.90mm | 0.0748 | 84 | 28 | 1000 | -0.027 | 1500 | 3.00 | 550 |
| #48 | 0.0760 | 84 | 28 | 1000 | -0.028 | 1500 | 3.00 | 550 |
| 1.95mm | 0.0768 | 81 | 27 | 1000 | -0.028 | 1500 | 3.00 | 550 |
| 5/64 | 0.0781 | 81 | 27 | 1000 | -0.028 | 1500 | 3.00 | 550 |
| #47 | 0.0785 | 81 | 27 | 1000 | -0.028 | 1500 | 3.00 | 550 |
| 2.00mm | 0.0787 | 81 | 27 | 1000 | -0.028 | 1500 | 3.00 | 550 |
| 2.05mm | 0.0807 | 78 | 26 | 1000 | -0.029 | 1500 | 3.00 | 550 |
| #46 | 0.0810 | 78 | 26 | 1000 | -0.029 | 1500 | 3.00 | 550 |
| #45 | 0.0820 | 78 | 26 | 1000 | -0.029 | 1500 | 3.00 | 550 |
| 2.10mm | 0.0827 | 75 | 25 | 1000 | -0.029 | 1500 | 3.00 | 550 |
| 2.15mm | 0.0846 | 75 | 25 | 1000 | -0.030 | 1500 | 3.00 | 550 |
| #44 | 0.0860 | 72 | 24 | 1000 | -0.030 | 1500 | 3.00 | 550 |
| 2.20mm | 0.0866 | 72 | 24 | 1000 | -0.030 | 1500 | 3.00 | 550 |
| 2.25mm | 0.0886 | 72 | 24 | 1000 | -0.031 | 1500 | 3.00 | 550 |
| #43 | 0.0890 | 72 | 24 | 1000 | -0.031 | 1500 | 3.00 | 550 |
| 2.30mm | 0.0906 | 69 | 23 | 1000 | -0.031 | 1500 | 3.00 | 550 |
| 2.35mm | 0.0925 | 69 | 23 | 1000 | -0.032 | 1500 | 3.00 | 550 |
| #42 | 0.0935 | 66 | 22 | 1000 | -0.032 | 1500 | 3.00 | 550 |
| 3/32 | 0.0938 | 66 | 22 | 1000 | -0.032 | 1500 | 3.00 | 550 |
| 2.40mm | 0.0945 | 66 | 22 | 1000 | -0.032 | 1500 | 3.00 | 550 |
| #41 | 0.0960 | 66 | 22 | 1000 | -0.032 | 1500 | 3.00 | 550 |
| 2.45mm | 0.0965 | 66 | 22 | 1000 | -0.033 | 1500 | 3.00 | 550 |
| #40 | 0.0980 | 63 | 21 | 1000 | -0.033 | 1500 | 3.00 | 550 |
| 2.50mm | 0.0984 | 63 | 21 | 1000 | -0.033 | 1500 | 3.00 | 550 |
| #39 | 0.0995 | 63 | 21 | 1000 | -0.033 | 1500 | 3.00 | 550 |
| 2.55mm | 0.1004 | 63 | 21 | 1000 | -0.033 | 1500 | 3.00 | 550 |
| #38 | 0.1015 | 63 | 21 | 1000 | -0.034 | 1500 | 3.00 | 550 |
| 2.60mm | 0.1024 | 63 | 21 | 1000 | -0.034 | 1500 | 3.00 | 550 |
| #37 | 0.1040 | 60 | 20 | 1000 | -0.034 | 1200 | 3.00 | 550 |
| 2.65mm | 0.1043 | 60 | 20 | 1000 | -0.034 | 1200 | 3.00 | 550 |
| 2.70mm | 0.1063 | 60 | 20 | 1000 | -0.035 | 1200 | 3.00 | 550 |
| #36 | 0.1065 | 60 | 20 | 1000 | -0.035 | 1200 | 3.00 | 557 |
| 2.75mm | 0.1083 | 60 | 20 | 1000 | -0.035 | 1200 | 3.00 | 567 |
| 7/64 | 0.1094 | 60 | 20 | 1000 | -0.036 | 1200 | 3.00 | 573 |
| #35 | 0.1100 | 60 | 20 | 1000 | -0.036 | 1200 | 3.00 | 576 |
| 2.80mm | 0.1102 | 60 | 20 | 1000 | -0.036 | 1200 | 3.00 | 577 |
| #34 | 0.1110 | 60 | 20 | 1000 | -0.036 | 1200 | 3.00 | 581 |
| 2.85mm | 0.1122 | 60 | 20 | 1000 | -0.036 | 1200 | 3.00 | 587 |
| #33 | 0.1130 | 60 | 20 | 1000 | -0.036 | 1200 | 3.00 | 591 |
| 2.90mm | 0.1142 | 60 | 20 | 1000 | -0.037 | 1200 | 3.00 | 598 |
| #32 | 0.1160 | 60 | 20 | 1000 | -0.037 | 1200 | 3.00 | 607 |
| 2.95mm | 0.1161 | 60 | 20 | 1000 | -0.037 | 1200 | 3.00 | 608 |
| 3.00mm | 0.1181 | 60 | 20 | 1000 | -0.038 | 1200 | 3.00 | 618 |
| #31 | 0.1200 | 60 | 20 | 1000 | -0.038 | 1200 | 3.00 | 628 |
| 3.05mm | 0.1201 | 60 | 20 | 1000 | -0.038 | 1200 | 3.00 | 629 |
| 3.10mm | 0.1220 | 60 | 20 | 1000 | -0.038 | 1200 | 3.00 | 638 |
| 3.15mm | 0.1240 | 60 | 20 | 1000 | -0.039 | 1200 | 3.00 | 649 |
| 1/8 | 0.1250 | 60 | 20 | 1000 | -0.039 | 1200 | 3.00 | 654 |

Note: This information is based on 120K RPM Spindle Capability. Please use maximum spindle speed if listed RPM is unattainable

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| Drill Size | Diameter (inch) | Feed (inch/min) | Speed (k-rpm) | Retract (inch/min) | Z-Axis Offset (inches) | Max Hits | Chipload (mm/rev) | SFM |
|------------|--------------------|--------------------|------------------|-----------------------|---------------------------|----------|----------------------|------|
| 3.20mm | 0.1260 | 40 | 20 | 1000 | -0.018 | 1000 | 2.00 | 659 |
| 3.25mm | 0.1280 | 40 | 20 | 1000 | -0.018 | 1000 | 2.00 | 670 |
| #30 | 0.1285 | 40 | 20 | 1000 | -0.019 | 1000 | 2.00 | 672 |
| 3.30mm | 0.1299 | 40 | 20 | 1000 | -0.019 | 1000 | 2.00 | 680 |
| 3.35mm | 0.1319 | 40 | 20 | 1000 | -0.019 | 1000 | 2.00 | 690 |
| 3.40mm | 0.1339 | 40 | 20 | 1000 | -0.019 | 1000 | 2.00 | 701 |
| 3.45mm | 0.1358 | 40 | 20 | 1000 | -0.019 | 1000 | 2.00 | 711 |
| #29 | 0.1360 | 40 | 20 | 1000 | -0.019 | 1000 | 2.00 | 712 |
| 3.50mm | 0.1378 | 35 | 20 | 1000 | -0.019 | 1000 | 1.75 | 721 |
| 3.55mm | 0.1398 | 35 | 20 | 1000 | -0.019 | 1000 | 1.75 | 732 |
| #28 | 0.1405 | 35 | 20 | 1000 | -0.019 | 1000 | 1.75 | 735 |
| 9/64 | 0.1406 | 35 | 20 | 1000 | -0.019 | 800 | 1.75 | 736 |
| 3.60mm | 0.1417 | 35 | 20 | 1000 | -0.019 | 800 | 1.75 | 742 |
| 3.65mm | 0.1437 | 35 | 20 | 1000 | -0.020 | 800 | 1.75 | 752 |
| #27 | 0.1440 | 35 | 20 | 1000 | -0.020 | 800 | 1.75 | 754 |
| 3.70mm | 0.1457 | 35 | 20 | 1000 | -0.020 | 800 | 1.75 | 762 |
| #26 | 0.1470 | 35 | 20 | 1000 | -0.020 | 800 | 1.75 | 769 |
| 3.75mm | 0.1476 | 35 | 20 | 1000 | -0.020 | 800 | 1.75 | 772 |
| #25 | 0.1495 | 35 | 20 | 1000 | -0.020 | 800 | 1.75 | 782 |
| 3.80mm | 0.1496 | 35 | 20 | 1000 | -0.020 | 800 | 1.75 | 783 |
| 3.85mm | 0.1516 | 35 | 20 | 1000 | -0.020 | 800 | 1.75 | 793 |
| #24 | 0.1520 | 35 | 20 | 1000 | -0.020 | 600 | 1.75 | 795 |
| 3.90mm | 0.1535 | 35 | 20 | 1000 | -0.020 | 600 | 1.75 | 803 |
| #23 | 0.1540 | 35 | 20 | 1000 | -0.020 | 600 | 1.75 | 806 |
| 3.95 | 0.1555 | 30 | 20 | 1000 | -0.020 | 600 | 1.50 | 814 |
| 5/32 | 0.1562 | 30 | 20 | 1000 | -0.020 | 600 | 1.50 | 817 |
| #22 | 0.1570 | 30 | 20 | 1000 | -0.020 | 600 | 1.50 | 822 |
| 4.00mm | 0.1575 | 30 | 20 | 1000 | -0.020 | 600 | 1.50 | 824 |
| #21 | 0.1590 | 30 | 20 | 1000 | -0.021 | 600 | 1.50 | 832 |
| 4.05mm | 0.1594 | 30 | 20 | 1000 | -0.021 | 600 | 1.50 | 834 |
| #20 | 0.1610 | 30 | 20 | 1000 | -0.021 | 600 | 1.50 | 843 |
| 4.10mm | 0.1614 | 30 | 20 | 1000 | -0.021 | 600 | 1.50 | 845 |
| 4.15mm | 0.1634 | 30 | 20 | 1000 | -0.021 | 600 | 1.50 | 855 |
| 4.20mm | 0.1654 | 30 | 20 | 1000 | -0.021 | 600 | 1.50 | 866 |
| #19 | 0.1660 | 30 | 20 | 1000 | -0.021 | 600 | 1.50 | 869 |
| 4.25mm | 0.1673 | 30 | 20 | 1000 | -0.021 | 600 | 1.50 | 876 |
| 4.30mm | 0.1693 | 30 | 20 | 1000 | -0.021 | 600 | 1.50 | 886 |
| #18 | 0.1695 | 30 | 20 | 1000 | -0.021 | 600 | 1.50 | 887 |
| 4.35mm | 0.1713 | 30 | 20 | 1000 | -0.021 | 600 | 1.50 | 896 |
| 11/64 | 0.1719 | 30 | 20 | 1000 | -0.021 | 600 | 1.50 | 900 |
| #17 | 0.1730 | 30 | 20 | 1000 | -0.021 | 500 | 1.50 | 905 |
| 4.40mm | 0.1732 | 30 | 20 | 1000 | -0.021 | 500 | 1.50 | 906 |
| 4.45mm | 0.1752 | 30 | 20 | 1000 | -0.022 | 500 | 1.50 | 917 |
| #16 | 0.1770 | 30 | 20 | 1000 | -0.022 | 500 | 1.50 | 926 |
| 4.50mm | 0.1772 | 30 | 20 | 1000 | -0.022 | 500 | 1.50 | 927 |
| 4.55mm | 0.1792 | 30 | 20 | 1000 | -0.022 | 500 | 1.50 | 938 |
| #15 | 0.1800 | 30 | 20 | 1000 | -0.022 | 500 | 1.50 | 942 |
| 4.60mm | 0.1811 | 30 | 20 | 1000 | -0.022 | 500 | 1.50 | 948 |
| #14 | 0.1820 | 30 | 20 | 1000 | -0.022 | 500 | 1.50 | 952 |
| 4.65mm | 0.1831 | 30 | 20 | 1000 | -0.022 | 500 | 1.50 | 958 |
| #13 | 0.1850 | 30 | 20 | 1000 | -0.022 | 500 | 1.50 | 968 |
| 4.70mm | 0.1850 | 30 | 20 | 1000 | -0.022 | 500 | 1.50 | 968 |
| 4.75mm | 0.1870 | 30 | 20 | 1000 | -0.022 | 500 | 1.50 | 979 |
| 3/16 | 0.1875 | 30 | 20 | 1000 | -0.022 | 500 | 1.50 | 981 |
| 4.80mm | 0.1890 | 30 | 20 | 1000 | -0.023 | 500 | 1.50 | 989 |
| #12 | 0.1890 | 30 | 20 | 1000 | -0.023 | 500 | 1.50 | 989 |
| 4.85mm | 0.1909 | 30 | 20 | 1000 | -0.023 | 500 | 1.50 | 999 |
| #11 | 0.1910 | 30 | 20 | 1000 | -0.023 | 500 | 1.50 | 1000 |
| 4.90mm | 0.1929 | 30 | 20 | 1000 | -0.023 | 500 | 1.50 | 1010 |
| #10 | 0.1935 | 30 | 20 | 1000 | -0.023 | 500 | 1.50 | 1013 |
| 4.95mm | 0.1949 | 30 | 20 | 1000 | -0.023 | 500 | 1.50 | 1020 |
| #9 | 0.1960 | 30 | 20 | 1000 | -0.023 | 400 | 1.50 | 1026 |
| 5.00mm | 0.1968 | 30 | 20 | 1000 | -0.023 | 400 | 1.50 | 1030 |
| 5.05mm | 0.1988 | 30 | 20 | 1000 | -0.023 | 400 | 1.50 | 1040 |
| #8 | 0.1990 | 30 | 20 | 1000 | -0.023 | 400 | 1.50 | 1041 |
| 5.10mm | 0.2008 | 25 | 20 | 1000 | -0.023 | 400 | 1.25 | 1051 |
| #7 | 0.2010 | 25 | 20 | 1000 | -0.023 | 400 | 1.25 | 1052 |
| 5.15mm | 0.2028 | 25 | 20 | 1000 | -0.023 | 400 | 1.25 | 1061 |
| 13/64 | 0.2031 | 25 | 20 | 1000 | -0.023 | 400 | 1.25 | 1063 |
| #6 | 0.2040 | 25 | 20 | 1000 | -0.024 | 400 | 1.25 | 1068 |
| 5.20mm | 0.2047 | 25 | 20 | 1000 | -0.024 | 400 | 1.25 | 1071 |
| #5 | 0.2055 | 25 | 20 | 1000 | -0.024 | 400 | 1.25 | 1075 |

Note: This information is based on 120K RPM Spindle Capability. Please use maximum spindle speed if listed RPM is unattainable

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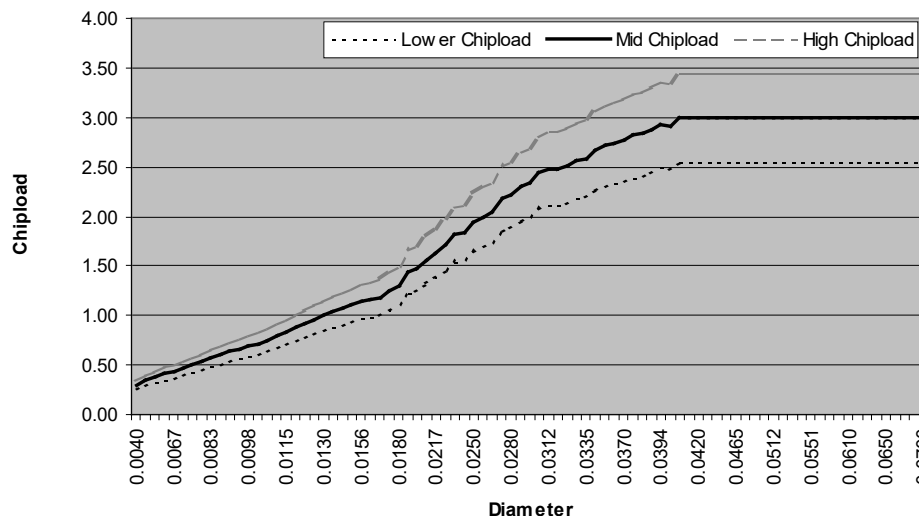
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| Drill Size | Diameter (inch) | Feed (inch/min) | Speed (k-rpm) | Retract (inch/min) | Z-Axis Offset (inches) | Max Hits | Chipload (mm/rev) | SFM |
|------------|-----------------|-----------------|---------------|--------------------|------------------------|----------|-------------------|------|
| 5.25mm | 0.2067 | 25 | 20 | 1000 | -0.024 | 400 | 1.25 | 1082 |
| 5.30mm | 0.2087 | 25 | 20 | 1000 | -0.024 | 400 | 1.25 | 1092 |
| #4 | 0.2090 | 25 | 20 | 1000 | -0.024 | 400 | 1.25 | 1094 |
| 5.35mm | 0.2106 | 25 | 20 | 1000 | -0.024 | 400 | 1.25 | 1102 |
| 5.40mm | 0.2126 | 25 | 20 | 1000 | -0.024 | 400 | 1.25 | 1113 |
| #3 | 0.2130 | 25 | 20 | 1000 | -0.024 | 400 | 1.25 | 1115 |
| 5.45mm | 0.2146 | 25 | 20 | 1000 | -0.024 | 400 | 1.25 | 1123 |
| 5.50mm | 0.2165 | 25 | 20 | 1000 | -0.024 | 400 | 1.25 | 1133 |
| 5.55mm | 0.2185 | 25 | 20 | 1000 | -0.024 | 400 | 1.25 | 1143 |
| 7/32 | 0.2188 | 25 | 20 | 1000 | -0.024 | 400 | 1.25 | 1145 |
| 5.60mm | 0.2205 | 25 | 20 | 1000 | -0.025 | 400 | 1.25 | 1154 |
| #2 | 0.2210 | 25 | 20 | 1000 | -0.025 | 400 | 1.25 | 1157 |
| 5.65mm | 0.2224 | 25 | 20 | 1000 | -0.025 | 400 | 1.25 | 1164 |
| 5.70mm | 0.2244 | 25 | 20 | 1000 | -0.025 | 400 | 1.25 | 1174 |
| 5.75mm | 0.2264 | 25 | 20 | 1000 | -0.025 | 400 | 1.25 | 1185 |
| #1 | 0.2280 | 25 | 20 | 1000 | -0.025 | 400 | 1.25 | 1193 |
| 5.80mm | 0.2283 | 25 | 20 | 1000 | -0.025 | 400 | 1.25 | 1195 |
| 5.85mm | 0.2302 | 25 | 20 | 1000 | -0.025 | 400 | 1.25 | 1205 |
| 5.90mm | 0.2323 | 25 | 20 | 1000 | -0.025 | 400 | 1.25 | 1216 |
| A | 0.2340 | 25 | 20 | 1000 | -0.025 | 400 | 1.25 | 1225 |
| 5.95mm | 0.2343 | 25 | 20 | 1000 | -0.026 | 400 | 1.25 | 1226 |
| 15/64 | 0.2344 | 25 | 20 | 1000 | -0.026 | 400 | 1.25 | 1227 |
| 6.00mm | 0.2362 | 25 | 20 | 1000 | -0.026 | 400 | 1.25 | 1236 |
| B | 0.2380 | 25 | 20 | 1000 | -0.026 | 400 | 1.25 | 1246 |
| 6.05mm | 0.2382 | 25 | 20 | 1000 | -0.026 | 400 | 1.25 | 1247 |
| 6.10mm | 0.2402 | 25 | 20 | 1000 | -0.026 | 400 | 1.25 | 1257 |
| C | 0.2420 | 25 | 20 | 1000 | -0.026 | 400 | 1.25 | 1266 |
| 6.15mm | 0.2421 | 25 | 20 | 1000 | -0.026 | 400 | 1.25 | 1267 |
| 6.20mm | 0.2441 | 25 | 20 | 1000 | -0.026 | 400 | 1.25 | 1277 |
| D | 0.2460 | 25 | 20 | 1000 | -0.026 | 400 | 1.25 | 1287 |
| 6.25mm | 0.2461 | 25 | 20 | 1000 | -0.026 | 400 | 1.25 | 1288 |
| 6.30mm | 0.2480 | 25 | 20 | 1000 | -0.026 | 400 | 1.25 | 1298 |
| 6.35mm | 0.2500 | 25 | 20 | 1000 | -0.027 | 400 | 1.25 | 1308 |
| 6.40mm | 0.2520 | 25 | 20 | 1000 | -0.027 | 400 | 1.25 | 1319 |
| 6.50mm | 0.2559 | 25 | 20 | 1000 | -0.027 | 400 | 1.25 | 1339 |
| F | 0.2570 | 25 | 20 | 1000 | -0.027 | 400 | 1.25 | 1345 |
| 6.60mm | 0.2598 | 25 | 20 | 1000 | -0.027 | 400 | 1.25 | 1360 |

In some cases, there may be an opportunity to increase the chipload based on the application's robustness. Variables such as machine technology and condition, stack support materials, and Kyocera design selection may allow the increased throughput with higher chiploads. Multiply the recommended chipload by 1.15 to reach the higher chipload.

If the application is not as robust due to heavy glass, high copper content, tight annular ring requirements, or similar, multiply the recommended chipload by 0.85.

Chiploads for FR-4 Multilayer Low Tg



Note: This information is based on 120K RPM Spindle Capability. Please use maximum spindle speed if listed RPM is unattainable